THE QUANTITY THEORY OF MONEY AND FINANCIAL ACCOUNTING MEASUREMENT: ON THE INFLUENCE AND IMPACT OF A FLAWED THEORY

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ABSTRACT

The Quantity Theory of Money is implicitly embedded in the arguments for price level adjusted financial statements - inflation accounting. Historically, the instability of commodity prices, which is due to changes in relative prices, is considered by one school of economic thought (monetarism) as a reflection of the instability of the value of nominal money. Monetarists maintain that it is the level of the money supply which accounts for the instability of commodity prices. Hence, (1) all changes in the level of the money supply is deemed responsible for changes in the general level of prices, and (2) with each increase in the general level of prices, paper money is said to lose value. In a money economy, nominal money prices reflect the underlying exchange ratios of the various commodities that are produced and exchanged for nominal money. In the absence of monetary dislocation (monetary revaluation or devaluation), any change in the nominal price of a commodity reflects a change in its purchasing power (a change in its exchange ratio vis-a-vis other commodities). Since the physical form of a commodity is relatively constant while the price varies, the simultaneity of these two conditions produces a sensory illusion that leads the monetarists to argue that the measuring device (money) is defective. This paper attempts to demonstrate (in the absence of monetary dislocation): (1) the stability of paper money, which makes it a valid measuring device; and (2) that the quantity theory of money, which is the basis of constant dollar accounting, is a flawed theory.

INTRODUCTION

While accounting for price level changes is not on the FASB's agenda, this area of research is much too vital to be ignored or abandoned. The arguments in the accounting literature in support of price level adjusted financial statements implicitly rest upon the perceptions of general price level changes advanced by the monetarist school of thought in the economics literature. The monetarists' position, that changes in the price level are caused by changes in the level of the nominal money supply (M), is grounded tautologically in the *quantity theory of money* which holds that "the nominal money supply at time t is the nominal value of all assets". This view of money establishes "perfect proportionality between money and the price level" [Sargent 1982, 1219]. Therefore, *if* this view holds, that it is the level of M which is accountable for inflation--changes in the general level of prices, *then* nominal money is a defective measuring device and financial accounting measurement with nominal money as the measuring unit would be un-interpretable.

Implicitly adhering to the “quantity theory of money”, the Accounting Standards Steering Committee (ASSC) of the Institute of Chartered Accountants in England and Wales, on May 14, 1974, issued SSAP7; it required a supplementary Current Purchasing Power Statement [Sandilands 1975]. SSAP7 was rescinded and replaced by SSAP16 in March 1980. That standard provided for three options to include current cost accounting in each situation. However, SSAP16 was rescinded in 1986. Like the ASSC, the Financial Accounting Standards Board (FASB) was concerned with the need for 'inflation' accounting. In 1979, the FASB issued *Statement of Financial Accounting Standards No. 33: Financial Reporting and Changing Prices* (SFAS33), which provided for *constant dollar and current cost accounting information*.

The FASB maintained that: “Investors' need for information about the *purchasing power* associated with their investments can be met by the use of a "*constant dollar*" measuring unit” [SFAS 33 paras.138,139]. In 1984, SFAS33 was rescinded in part with *Statement of Financial Accounting Standards No. 82 - Financial Reporting and Changing Prices: Elimination of Certain Disclosures* (SFAS82). In 1986, *Statement of Financial Accounting Standards No. 89: Financial Reporting and Changing Prices* (SFAS89) [1986] eliminated the last vestige of SFAS33, and encouraged firms to disclose supplementary information on the effects of changing prices. It is important to note that the FASB maintains that while there is little inflation at the present time in the U.S. economy, if this condition does not continue, the requirement for disclosure of the effects of changing prices may be reintroduced [SFAS89, 7].

In the absence of monetary dislocation, the deficiency attributed to unit of measure in financial accounting is invalid. Financial accounting is not intended to measure total physical output; it provides a measure of operational efficiency [Weber 1947, 202-211]. The recommendation for ‘inflation’ accounting is based on a flawed economic theory. That is, while the monetarists argue for causation from nominal money to nominal income ($M \rightarrow Y$), "[h]istorically, M has lagged behind Y at turning points [in the business cycle]. Crude cause and effect would then lead to the inference that Y is the cause and M effect. But those who want to reverse the direction of causation can always take foolish comfort in the fact that the rate of growth of M, dM/dt, will for a quasi-sinusoidal fluctuation turn down one-quarter cycle before M itself--and thus the causal sequence $dM/dt \rightarrow Y$ may help save the appearances" [Samuelson 1965, 103].

Inflation and Accounting Measurement

Fabricant [1971, 42] maintained that: "even moderate inflation or deflation . . . may cause the general purchasing power of the dollars in which a company's net income or net worth is measured at one time to differ significantly from the value of the dollars in which its income or in which the accounts . . . are measured . . . ." Money as a measuring unit is challenged by accountants due to the heavy reliance upon monetarism--the quantity theory of money.

Myddleton's [1984, 20] has argued: "What is the point of maintaining 'money capital' when the value of money is falling fast?" Moonitz [1970, 474-475] maintained: "The 'price-level problem' in accounting is one of isolating and reporting the effects of . . . the changes that have occurred in the relative price of money. . . The 'scale' adjustment for the change in the exchange-value of money should be made . . . [F]inancial data originally expressed in terms of diverse units of purchasing-power are to be restated in a single uniform unit."

This challenge of the money measure introduces a fundamental issue in measurement in financial accounting. *Money is deemed to be losing value because there are too many dollars chasing too few goods, and this loss in value is measurable by using goods and services to measure money*.[1] Thus, the measurement process is reversed - the items to be measured are being used to measure the measuring device [Jones 1935, 174]. This development is an important instance of the fallacy of false disjunction.

In the situation described above, it is "the way people frequently argue that things cannot be constant if they change, or vice versa. . . [To avoid this fallacy one] must . . . [distinguish] between the . . [manner] in which things change and the . . [manner] in which they remain the same" [Cohen and Nagel 1934, 386-387]. In the economic system, while the physical substance of a commodity stays the same, its utility is subject to change. Utility may be augmented or diminished. The utility of an object is independent of the physical substance of its composition, but it is time and space dependent. This condition, which confronts financial accounting, has its counterpart in physics in which the mass of an object is independent of its position; whereas, the weight of that object is dependent on its position in the universe [Haight Jr. 1964, 121]. The same physical presence over time cannot be equated with want satisfaction (utility) which varies over time. Intertemporal comparability of utility cannot be

made [Bailey 1825, 71-72; Pareto 1927, 225; Fisher and Shell 1968, 17-18].

Nominal money has a service function; however, conditions can materialize which may preclude it from fulfilling that function. This condition was experienced in Germany [1919-1923] whereby the mark was replaced with foreign currencies: "[f]irst in foreign trade, then in internal wholesale trade, and later in retail trade" [Bresciani-Turroni 1937,173]. Germany has been cited as a special case of monetary failure (dislocation) [Cassel 1921, 42-43; Holtfrerich 1986, 11,70,331; Crowther 1948, 6]; Poland, Austria, and Hungary were much milder cases [Bresciani-Turroni 1937; Sargent 1982]. In each of these cases, the rise in the level of prices was due to monetary dislocation and not changes in relative prices. Russia (1991-1993) is a recent example of monetary dislocation - the flight from the domestic currency (the ruble) into foreign exchange [Sachs and Woo 1994, 127]. *In the absence of monetary dislocation,* while changing demand and supply conditions for goods and services will produce different general price levels, nominal money will not lose value over time. (The exchange rate mechanism in international currency markets is not at issue here and is not being discussed.)

Exchange in a Money Economic System

A money economic system is a system of relative prices which reflects the set of exchange ratios--the purchasing power relationship among the various commodities that are exchanged for nominal money in the economy. Nominal money, which has an arbitrary assigned value but no intrinsic value, permits a uniform expression of the ratio of exchange among all commodities (e.g., A = 1/4B; B = 1/2C; C = 2D; etc.). "The 'power of exchange' or 'purchasing power' is the capacity or power of a good to obtain other goods in exchange. . . . It is a power that lies in the connection or relation of two things, and not in either of the things" [Smart 1931, 6]. Thus, it is the purchasing power of a commodity that determines the amount of nominal money for which it will be exchanged. The realignment over time among the various exchange ratios of commodities changes the general level of prices. The new exchange ratios for the commodities as expressed in nominal money prices reveal the *purchasing power gains and losses sustained by the individual commodities*. It is the net change among the exchange ratios that erroneously is considered by monetarists as the change in purchasing power of fiat money.[2] As the "quantity theory of money" is conceived, the

price level varies independently of changes in the average height of individual prices.[3] Thus adherence to this flawed theory leads many accountants to advocate that financial accounting measurement should be in constant dollars.

Absent monetary dislocation, the money supply is not accountable for general price level changes; and the nominal money measure is not defective. This paper argues that the *fallacy of false disjunction* fosters and perpetuates arguments in favor of the quantity theory of money. The rest of the paper is divided into five parts: Quantity Theory of Money; Price Level Changes and Fallacy of False Disjunction; Money, Purchasing Power, and Nominal Money Price; The Value of Money; and Summary and Conclusion.

QUANTITY THEORY OF MONEY

Beginning with Jean Bodin (1568),[4] theorists since the sixteenth century have viewed general price level changes (stated as changes in the *value of money*) as some sort of economic wave carried by *purchasing power*, that famous and elusive device through which commodities are exchangeable, and the sole purpose of which is to communicate prices from one place to another. To Wicksell [1935, 129], "the value of money and the price level are synonymous, or more correctly, correlative ideas." By definition any change in the price level would constitute a change in the value of money. Similarly, Friedman [1980, 254-255; 1958/1969] maintains that inflation (wherever it is observed) is a monetary phenomenon.[5] However, a monetary cause of inflation would be true in an economy in which paper money was replaced by precious metal as the medium of exchange; even then, it has been shown that only in limited and in infrequent situations has this condition been fulfilled [Brenner 1971, 74; Gould 1965, 94-96,108,109].

Evidence for twenty countries for an eight-year period contradicts Friedman's hypothesis [Fellner et al. 1964, 13]. As per Meltzer [1977, 201-202], "[I]f maintained inflation is defined as the average rate of price change, the results deny that inflation has been entirely a response to growth in money." Substantial empirical evidence casts serious doubts on the relationship between the growth rate of the money supply and rate of change of the price level [Smith 1985a,532-543; 1985b,1193-1196]. In addition, “[Thirty] years of monetarists analysis has

not been able to demonstrate the empirical existence of a structurally stable transmission mechanism between money and inflation to the satisfaction of its own practitioners, let alone its critics. ... Monetarists in search of support for the case that money is more a causing than a caused variable often turn to the analysis of extreme experiences" [Laidler 1989, 1157].

In reality, inflation is attributable to non-monetary factors [Dow and Saville 1988, 240]; it is to be found in a barter economy [Fuller 1980, 6-7]. While an increase in the money supply can accentuate a rise in the price level, a change in the general price level is not a monetary phenomenon [Ball 1964, 69,77; Goodhart 1975, 199,216, 217; Hansen 1951; Harrod 1973, 82; Hawtrey 1950, Chap.1; Holtfrerich 1986]. Benjamin Friedman [1990, 70-71] is quite explicit on this point:

> "The simple correlation between money growth and inflation . . . calculated in the form often recommended by Milton Friedman, although statistically significant, is now significantly negative. One can only wonder what, other than a tautology, is left of the notion that inflation is 'always and everywhere a monetary phenomenon' "

The monetarist model crashed in the 1980s and burned; "whatever monetary aggregate was being targeted by a central bank turned out to be one with the lowest correlation with nominal income" [De Long 2000, 92]. Since 1982, small increases in the general level of prices has become associated with more rapid growth of the money supply. The average annual growth of M1 has accelerated to 9.5 percent but, contrary to the monetarist expectation, growth in the general price level has averaged just 3.5 percent [Walsh 1990, 8-9,186] and the velocity of money has declined [Fisher 1989, 156-158].

Perceptions on Price Indices

Walsh [1903] and Hawtrey [1913, 214] have stressed that it is prices of goods and services that change, not the value of money. The adjustment of supply to changing demand produces new nominal money prices to reflect the new supply/demand relationship, and it is through use of these nominal money prices in the creation of indices that the price level changes of goods and services can be assessed and expressed. However, such indices are not to correct for the effects of inflation, instead they are established to accommodate physical productivity analysis (physical output measurement for national and international comparison).

When paper money and commodity prices interact and form certain patterns which appear in a visual field, such as price indices, the perception of the strong interaction can lead to a distorted view. This situation is comparable to the issue of apparent movement: "when local stimulations occur in different places under certain temporal conditions" [Kohler 1969, 34-45]. The distortion in perception [Ayer 1958, 91-148] is the apparent shrinkage of the measuring unit or loss in the value of paper money [Walsh 1903, 117-131,199; Bernstein 1935, 503]. However, money does not change in value except in the case of an official revaluation/ devaluation or lack of acceptability (in rare cases) due to loss of faith in the government. For example, in Germany during 1918-1923, a *new paper money,* which was introduced to replace the previous commodity money, was rejected by the populace. Subsequently on October 15, 1923, *another new paper money*, the Rentenmark, was introduced and it was accepted [Sargent 1982, 82; Stolper 1967, 53-93]. This situation necessitated that accounting numbers representing *paper* marks be deflated to represent their nominal value equivalent in pre-World War I *gold* marks [Clarke 1976, 264-275]. This abnormal experience is the basis for Sweeney's [1936] stabilized (real terms) accounting.

In the economics literature, it is maintained that the individual suffers from money illusion if he/she calculates in nominal terms and not in real terms. However, nominal money flow is the critical dimension because nominal money constitutes the medium of exchange in a money economy. As attributed to Patinkin [1961], "an essential condition for monetary control of the price level is that the central bank practice 'money illusion' with regard to the supply of the relevant monetary aggregate. That is, although the demand for the monetary aggregate is in real terms, the central bank must focus on establishing and maintaining its policy in terms of the nominal supply of the monetary aggregate" [Boschen 1990, 94]. Similarly, Blinder (former chairman of the Federal Reserve Board) [1998, 30] maintains that the Federal Open Market Committee must act in nominal money terms while thinking in real terms.

Real terms are not the basis of transacting in the economic system. The exchange activities of the system are priced out in nominal money and nominal money is the basis of the settlement of most (if not all) transactions. The conclusion that financial statements are defective because they reflect measurement in nominal terms is grounded in a flawed theory.

Therefore, recommendations to adjust the measure of performance for changing price levels in the absence of monetary dislocation is due to a sensory illusion - the fallacy of false disjunction.

PRICE LEVEL CHANGES AND THE FALLACY OF FALSE DISJUNCTION

Invariably, one hears the saying: "the more things change the more they remain the same". In one sense, this statement signifies that there are aspects in things which change and other aspects in which they do remain the same. The fallacy of false disjunction presents itself when one inadvertently/falsely separates or identifies the: (1) aspects of things that actually have changed as being those aspects which have remained the same, and (2) aspects of things that actually have remained the same as those aspects which have changed. For instance, "... when a person walks away from us, the primary visual impression is of an object decreasing in size, but here, as in the case of perspective, the false sensory appearance is corrected by a kind of influence that enters into the perceptual experience itself, and we perceive, not an object of changing size with constant distance, but an object of constant size with changing distance . . ." [Montague 1925, 251]. If we are told that a person's height was measured at six feet immediately before walking away from us, we cannot conclude that the measuring device is defective since at the distance away from us the person does not appear to be six feet. Similarly, this paper argues that the flow of nominal money in exchange for the physical flow of goods and services creates a perceptual field that lends itself to a false sensory appearance.

Noticeable in everyday life is the fact that the want satisfaction of objects changes in the minds of individuals due to psychological factors, while the physical aspects of those objects remain (more or less) constant. Alternatively, the purchasing power (the exchange relationship) of individual commodities changes as a consequence of changes in taste and technology, although the physical form of each of these commodities remains relatively unaltered. The fallacy witnessed in current research is that the researcher, who is confused by the simultaneity of two conditions: *real* action and *apparent* action, concludes that the *apparent* action is the *real* action which produces another action [Christenson 1980].

In this analysis, the physical form of the item remains relatively constant, while its money

price varies. The researcher is confused by the simultaneity of these two conditions: the constancy of the physical form and the variation of the nominal money price. Failing to differentiate between the phase in which exchanges have changed and the phase in which they have remained the same, the researcher concludes that the nominal money unit as a measuring device is defective. The alleged instability of paper money is due to a sensory illusion caused by partial analysis. A complete analysis on the nature of money and the basis of purchasing power would reveal that money has an invariable nominal value and only a perceived variable purchasing power, which are critical to an effective money economy. Table 1 illustrates this sensory illusion.

TABLE 1

THE RELATIONSHIP BETWEEN AND THE CHARACTERISTICS OF EXCHANGE VALUE OF COMMODITIES AND NOMINAL MONEY

ATTRIBUTES

Money	*Commodities*
1. Nominal Value	Exchangeable Value
2. Non-Consumable	Consumable (as a Final or Intermediate Good or Service)
3. Produced exclusively under Monopolistic Conditions	Produced generally under Competitive Conditions
4. An Invariable Value (Nominally Defined to Measure Commodity Exchangeable Value)	A Variable Value (Dependent upon Demand and Supply Conditions)
Expressed as: ***Price***	Expressed as: ***Purchasing Power***

SENSORY ILLUSION - TRANSFER OF ATTRIBUTE

Purchasing Power Ascribed to:	Nominal Money ***Price*** Ascribed to:
Money	***Commodities***

MONEY, PURCHASING POWER, AND NOMINAL MONEY PRICE

With the introduction of money of account into the barter system as a reference frame (a standard measure), a nominal money price system emerged and the physical exchange ratios were converted into a system of relative prices. However, the underlying physical exchange

ratios were not altered, they were continued. That is if $p is assigned as the price of A, then the prices of B and C are simultaneously determined. Physical exchange ratios are translated into corresponding nominal money prices preserving the physical exchange relationships. Mill [1857(1929), 488] stated that "the relations of commodities to one another remain unaltered by money," and "things which by barter would exchange for one another will, if sold for money, sell for an equal amount of it." Similarly, Simmel [1978, 124] maintained that money "expresses the *relation* between things, a relation that persists in spite of changes in the things themselves."

Accordingly, the expressing of the purchasing power of each commodity as a money price obscures the fact that price level changes merely reflect the net effect of changes in the various exchange ratios. Even though the economy seems to have changed considerably, the initial underlying mechanism for determining the basis of exchanges persists throughout the evolutionary process. Thus, “the more things change, the more they remain the same.” Historically, there are two kinds of money: commodity money, and paper money. Any discussion on the loss in value of money must give cognizance to the difference between these two kinds of money.

Commodity Money: An Unstable Measure

It is quite true that money will not alter the relative system of exchange but it can and does affect the output of the system. This condition holds in a money economic system since the *general acceptability of money at its assigned nominal value* transforms money into an item to be accumulated in its own right, as a store of uncertain value. *While nominal money profit, as guided by the rate of return on money invested, is the motivating force for determining output*, for quite some time a concern for physical comparability to determine well-off-ness has existed in economics. The essential reason for this concern was a genuine loss in value of *commodity money,* which made it an unstable measure. The loss in value of commodity money was due to either a debasement of the metal content or a change in the supply and demand for the metal commodity, which constituted the commodity money [Ricardo 1809-1823, 103-114; Marshall 1929, 12-20,38-50].

Even when representative money (paper money which is backed by or merely represents

the commodity) *is used, instability is still present*. This condition has held [Myers 1970, 10-11] and will hold, since representative money is still commodity money which is subject to a change in value. For instance, if representative money is doubled in quantity without a doubling of the commodity which it represents, the value of the representative money will be halved. Equally true, there would be a loss in value of the commodity money if there is an increase in the supply of the commodity (gold, silver or whatever) [Meltzer 1977, 189-190]. This condition holds since the value of the commodity money is related to all other commodities based upon the demand and supply conditions [Jevons 1884, 32-76]. Clearly, loss in value of commodity money will produce a change in the unit of measure; hence, interperiod comparability is destroyed.

When a commodity money is in use, an invariable measure is needed to measure the changes in the relative value of commodities when there is a change in the relative value among commodities. Given this concern, Ricardo [1821, 40,294,367] pressed the need to find an invariable measure because the money in his day was a metal commodity money which had a variable value [Ricardo 1809-1823, 103-114]. Two points are of interest: (1) commodity money has a *variable* value; hence, commodity money is an *unstable* measure; and (2) the issuance of an excess of representative money over the underlying stock of commodity money reduces the value of the representative money. These two points are capsulized by Jevons [1884, 104] with gold digging and the effect is documented for the U.S. during the period 1897-1914 [Myers 1970, 243]. These two points carried from the past to the present constitute the basis for the concern of a loss in value of money.

Paper Money: A Stable Measure

Since the 1930s the gold standard has collapsed, and much of the world has continued to use money with no commodity value whatsoever [Hendrickson 1970, 26]. As per Keynes [1930, 7], "fiat money" possesses material substance; however, the intrinsic value of that substance: (1) is divorced from its monetary face value; (2) is not legally convertible into anything other than itself; and (3) has no objectively determined fixed value. Fiat/paper money is defined as: "money issued by governments backed only by the words that are written on pieces of paper" [Friedman 1982, 99], "and of no utility except in exchange" [Sargent

1982, 91]. "[It] is . . . intrinsically useless, noncounterfeitable pieces of paper that are costlessly produced by the government. They can be costlessly stored, . . . identified, and . . . transferred from one individual to another" [Freeman 1985, 148]. While paper money is clearly different from commodity money, *unfortunately the instability of commodity money erroneously is associated with paper money.*

Fiat money is the credit instrument of the issuing authority, the government. Essentially, it is faith in the government which provides for the general acceptability of nominal money as a medium of exchange. This acceptance of money is a form of "social action" [Weber 1947, 112]; it is "a sociological phenomenon" [Simmel 1978, 172]. The taxing power accounts for the faith in the government and enables the credit instrument to have general acceptability. Paper money was introduced into the economy as an arbitrary measure--an agreed upon *valuation* was assigned to it upon its introduction into the economy. Since nominal (fiat) money, unlike commodity money, is an arbitrary scale of measure*, its value cannot be determined (derived) from commodities. Likewise, the value (purchasing power) of a commodity cannot be determined (derived) from nominal money,* although prices of commodities are expressed in nominal money. What money will exchange for is a function of the time and place of the exchange.

MONEY AND PURCHASING POWER: THE INVARIABLE AND THE VARIABLE

Money, it is argued, is an invariable measure of exchange value (purchasing power). "Money of account . . . performs the same office with regard to the value of things, that degrees, minutes, seconds, etc. do with regard to angles, or as scales do to geographical maps or to plans of any kind" [Steuart 1767, 408]. Money measures in a consistent manner by being an arbitrary constant. Like an alphabet (basic unit of a language), money is established on the basis of arbitrary rules; thus, the same amount of service is always performed by the unit of money [Eiriksson 1954, 174; Pareto 1927, 225-228]. Since want satisfaction is psychological, exchange value is variable; it is a temporal measure of the value assigned to the physical quantity of the specific goods or services acquired to satisfy the want. Accordingly, money with its value established by convention (general acceptability in nominal terms) is a stable measuring device in a money economy, and *its mission is to measure relationships*

(intensity of want satisfaction) and not physical quantities [Cassel 1935, 54].

The illusion of purchasing power residing in money stems from the existence of similar physical units at different moments in time and in different places being exchanged for money. Since only commodities possess purchasing power, then in different regions of the same country, the purchasing power of the individual commodities (goods and services) will vary according to the demand and supply conditions of the different regions. Unequivocally, the purchasing power of a commodity is space and time dependent, since it is a relationship between that particular commodity and all other commodities in a particular place at a particular time. The following statement on "purchasing power parity" given by Marris [1984, 40], *though not intended for this purpose*, illustrates the point quite well:

> [S]uppose we found, by some kind of index-number calculation, that the general price level in *region A* was 10 percent higher than *region B of the same country.* Given a common currency, the "exchange rate" between the money circulating in the two regions is clearly 1.0, but the PPP for region A, in comparison with region B, is 0.91, this being the number by which it is necessary to multiply a given nominal income in A to give it the same purchasing power as a corresponding income in B. (*Italics added.*)

In the above example, nominal money income is affected by the supply and demand conditions of goods and services in the different regions. This purchasing power effect does not mean, under normal circumstances, that a country's paper money has a different value in different regions of that country. The nominal money value is unitary in each and every part of the country. A dollar/ pound/yen has the same nominal value (same exchange value) in New York/London/Tokyo as in Cincinnati/Birmingham/Kyoto.

Purchasing power of a commodity is measured by a scale: money [Steuart 1767, 408-413]. Thus, money is only a reference frame for expressing the purchasing power of commodities. The transference of price (a measurement) to commodities does not in turn transform the commodities into the scale. Unfortunately, the monetarists have identified the purchasing power (exchangeable value) of commodities as being the relevant attribute of money. It is supposed that each and every year, advances of a certain quantity of goods and services should be exchanged for a certain quantity of money; instead, that *certain* quantity of money

invariably represents a *variable* quantity of goods and services. This condition obtains since there are two absolute quantities which are brought together in a certain relationship each and every year: (1) the physical quantity of goods and services in any given year for which money is exchanged and (2) the nominal quantity of money exchanged for that physical quantity of goods and services. The relationship established in any given year is due to the dynamic process of exchange and investment. Price and the rate of return on money invested emerge as relative factors, and the functioning of a money economy hinges critically upon these relative factors (Table 2).

TABLE 2
COEXISTENCE OF ABSOLUTES AND RELATIVES

Relative Factors	*Absolute Factors*
P = Price	Q = Commodity Supply
R = Rate of Return	M = Money Supply

In the preceding theoretical framework which underscores this paper, it was established that money has only an arbitrary nominal value. At this stage, an important question remains to be addressed: Is the value of paper money absolute or only relative?

THE VALUE OF MONEY

Paper money is an abstract money; being fiduciary in nature, it expresses and acknowledges an outstanding debt. It is superior to metallic currency because it is not subject to debasement (reduction of the metallic content to the detriment of the unsuspecting). It involves no competitive cost of production since it is not produced in competition with commodities [Corry 1962, 79-80]. The exchangeability of nominal money is the reason for it being demanded and stored. Therefore, the nature of the value of nominal money is a critical factor in assessing the validity of the measurement unit currently employed in financial accounting.

Intrinsic vs. Arbitrary Value

The changes in demand and supply conditions of individual goods and services (a factor

external to money), which are reflected in the changes in the relative prices of goods and services [Cassel 1921, 54], create the impression that money possesses a certain property: an intrinsic value (want satisfaction). Paper money does not have intrinsic value except in the case of hoarding; it has by decree a constant value (as a clearing mechanism) only in exchange. Money has a service function in society; thus, it possesses utility "but utility is not a quality *intrinsic* in a substance" [Jevons 1875, 63-66,73,190]. Gold and silver currency lose value because they possess ornate qualities which are want satisfaction qualities of these metals. Since *fiat money has no intrinsic value* but an agreed upon arbitrary value, it cannot change in value [Crowther 1948, 5-8]. "Clearly, the conditions which determine relative prices [of commodities] do *not* determine the value of money, for the relative price of the medium of exchange in terms of itself is by definition unity" [Uhr 1960, 217]. It is because money is a nominally defined parameter that changes, in the intrinsic values of commodities being exchanged in the economy, can be expressed (made known).

Money is a *known quantity*, whereas, the want satisfaction of the various commodities are *unknown variables*. Money, as an *institutional arrangement,* permits the expression of the relative values of all commodities in a uniform and consistent manner*, and introduces certainty into calculation* [Jevons 1875, 75]. In this setting of purchasing power uncertainty, the identifiable attribute of nominal money (a specified and unequivocal nominal value) permits transactors to accrue information over time, by processing signal information generated by nominal money prices. According to Blaug [1992, 141]: "The constant-real-income formulation of demand curves is . . . an evasion of issues: the income effect of a price change is as integral a part of the real-world consumer behavior as is the substitution effect and to leave it out is to adjust the world to fit our theories rather than the other way around."

Absolute vs. Relative Value

The fundamental question of relative value is whether or not there exists a frame of reference that may be considered absolute value. While it may be argued that there is a unique frame of absolute value, it can be argued that there is no special reference frame of absolute value, therefore no immutable reference frame can be distinguished from any other immutable reference frame by experiments conducted entirely within that frame. Essentially,

there is no unique commodity with special properties, except paper (fiat) money if that be included among commodities. Gold and silver have served at certain points in time as money, yet they are themselves commodities having alternative uses. However, paper (fiat) money is an allocative agent; it has no alternative use. As a medium of exchange and a unit of account, it has standardized and systematized economic activity (e.g., allocation of labor services). As an allocative agent, a demand and supply schedule exists for fiat money. The holder of fiat money is compensated for its use as an agent. Thus, supply and demand for fiat money determines the cost (interest rate) for its use.

The *absolute* view of value is based upon physical quantities (output) of the economic system. The physical quantities constitute the basis for arriving at real terms (real money, real income, etc.). The *relative* view of value focuses on the want satisfaction process in nominal money terms, which permits a standardized expression of price. Price is a coordinative definition of the exchange relationships among all commodities. Money price appears to be an objective measure of want satisfaction (the capacity of a commodity to satisfy an individual's perceived need); but it is a relative measure - it merely expresses the relationship of want satisfaction properties among commodities [Cassel 1935, 30,54].

Purchasing power is a subjective measure of the value of an object; in a physical sense, it is an absolute measure, since it is a measure of the exchange ratio among commodities based upon physical quantities. Given changes in taste and technology, the physical exchange relationships among commodities over time are subject to change. Also, the want satisfaction capacity of a commodity is psychologically induced; as such, it is not an absolute value, but only a relative value. Thus, it is with little wonder that Bailey [1825] was able to rouse the intellectual muscle of Malthus [1827] by pointing out the dilemma of the classical school in "the Ricardian attempt to define value in terms of a physical input--quantity of labor-time--and in that way reduce value (a psychological concept) to an absolute physical unit, completely independent of the market valuation process" [Paglin 1827,xiv].

SUMMARY AND CONCLUSION

The analysis has established that: (1) purchasing power (the exchange relationship of

physical quantities) is the variable value of a commodity which is reflected in money prices (*nominal* value); (2) a constant purchasing power does not exist; (3) want satisfaction is a relative variable and not an absolute physical variable; (4) in the absence of monetary dislocation, nominal money is a stable and valid (though not the only) measure of time and resource management; (5) since money prices permit an expression of the changing relationships among commodities of their purchasing powers, money is a reference frame; and (6) money measures a uniform flow of value, independent of the subjectivity which produces the exchange relationships among the various commodities.

Contradictions arise from the fallacy of false disjunction, since it is assumed that commodities have a constant value due to their (unchanging) physical condition, and, therefore, the existence of commodity-price instability is due to the changing value of money because of the instability of its purchasing power. In reality it is change in exchange ratios of some commodities, in relation to the other commodities, that produces price instability. Money in its measuring capacity captures those changes which reflect a realignment of the exchange ratios among various commodities. Persistent changes in the general level of prices is caused by the realignment of the exchange ratios among the various commodities and not due to the level of the money supply as argued in the quantity theory of money.

To deny the results of the analysis simply means that money has an extraordinary capacity of being able to self-select commodities against which it will lose value, against which it will gain in value, and against which it will retain its value. This condition holds since in some periods, prices of some commodities are lower than those of the preceding periods, while current prices of some other commodities are higher than those of the preceding period; and yet for another set of commodities, prices have remained the same for both periods. How can money lose value while it simultaneously gains in value and retains its value?

Implication for Financial Accounting

The FASB's position is grounded in the following:

> All events, transactions, and other circumstances affecting the financial statements are measured and reported in actual money amounts without adjustment for the fact that one dollar represents a different amount of purchasing power at different times. [SFAS33, Appendix C: Basis for Conclusions, para.101]

> [The] Accounting literature has long recognized that price changes cause difficulties in measuring and comparing financial statement elements. As Professor William [A.] Paton noted in 1922 [*Accounting Theory*. Houston, TX: Reprinted by Scholars Book Co., 1973,427], "the value of the dollar--its general purchasing power--is subject to serious change over a period of years... *Accountants... deal with an unstable, variable unit; and comparisons of unadjusted accounting statements prepared at intervals are accordingly always more or less unsatisfactory and are often positively misleading*." [SFAS33 Appendix B: Background, para. 71] (*Emphasis added*.)

While the FASB's case for inflation accounting rests implicitly on the purchasing power of money, which is grounded in the quantity theory of money, the existing economic systems so far along the social evolutionary process have not evolved into systems of "general purchasing power exchange", instead they have evolved into systems of "monetary exchange".

Purchasing power (exchange value), which resides in commodities, is the end result of the dynamic process of the interaction of psychological and technological forces. At any given point in time, the want satisfaction capacity of each commodity determines the exchange ratios of commodities; in this manner the purchasing power of each commodity is determined. The changes over time in the supply and demand for each and every commodity preclude the existence of a unique commodity with immutable purchasing power. Thus, an absolute and invariable purchasing power does not exist. Nominal money price provides for a simple and clear appreciation of the purchasing power relationships of commodities; it is an understanding of such relationships that facilitates planning in context of reality. In the absence of monetary dislocation, financial accounting measurement is not defective but the "quantity theory of money" is defective. Given that monetarism has been demonstrated empirically to be flawed and the fact that purchasing power resides in commodities and not in nominal money, advocates of inflation accounting will have to find some other reason to challenge the stability of nominal money as a measuring unit in financial accounting,

ENDNOTES

1 According to Okun: “The anonymous author who first expressed the cause of inflation as too much money chasing too few goods still holds the prize for the best simple-minded truth on this subject” [1970, 70].

2 For an extensive development of these issues, see Salvary [1997/1998;1993].

3 For an elaboration of this point see Moulton [1958, 198-200]

4 Bodin’s work is entitled: “Reponse aux Paradoxes de M. de Malestroit touchant L’Encherissement de toutes Choses et des Monnayes.” [Greidanus, 1950 10]. Moulton [1958, 4], has it as “Reply to the Paradoxes of Malestroit Concerning the Dearness of All Things and the Remedy Therefor.” *Early Economic Thought*. Arthur Eli Monroe (1924, 127).

5 It is claimed by Burdekin and Weidenmeir [2001] that “the drastic change in the quantity of money led to an equally drastic change in the price level” of the Confederate economy in 1864. The preponderance of research do not support this contention [Burdekin and Weidenmeir 2001, 1621].

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